TITLE OF INVENTION

Coating Composition for Metal conductors and Coating Process Involving the Use Thereof

Abstract of the Disclosure

A coating composition useful as an electrical insulation layer for metal conductors, particularly wires, that has improved de-coating properties for the partial de-coating of coated conductor by the use of laser irradiation; the coating composition comprises

A) 1 wt.% to 90 wt.%, based on the total weight of the binder, of one or more binders,

B) 0.3 wt.% to 25 wt.%, based on the total weight of the binder, of one or more reactive particles based on an element-oxygen bound network with elements from the series of aluminium, tin, boron, germanium, gallium, lead, the transition metals and the lanthanides and actinides, and

C) 0 wt.% to 95 wt.%, based on the total weight of the binder, of one or more conventional additives, solvents, pigments and/or fillers,

wherein the total of A) + B) +C) equal 100% and

wherein the reactive particles of component B are based on the element-oxygen bound network, on the surface of which reactive functions R_1 and optionally, non-reactive and/or partially reactive functions R_2 and R_3 are bound by way of the oxygen of the network,

R_1 being contained in an amount up to 98 wt.%, based on the weight of the particles, R_2 and R_3 in an amount from 0 wt.% to 97 wt.%, based on the weight of the particles, in the particle, in which

R_1 represents radicals of the metal acid; NCO, urethane, epoxide, epoxy, carboxylic acid anhydride, C=C double bond systems, OH, alcohols bound by way of oxygen, chelating agents, COOH, NH_2, NHR_4, and/or reactive resin components,

R_2 represents radicals of aromatic compounds, aliphatic compounds, fatty acid derivatives; esters and/or ethers,

R_3 represents resin radicals and

R_4 represents radicals of acrylate, phenol, melamine, polyurethane, polyester, polyester imide, polysulfide, epoxide, polyamide, polyvinyl

formal resins; aromatic compounds; aliphatic compounds; esters; ethers; alcoholates and/or chelating agents.